112701
SHAUGHNESSEY NO.

19
REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 6-21-82 OUT 8/25/82

FILE OR REG. NO.

PETITION OR EXP. PERMIT NO. 10182-EUP-GR

DATE OF SUBMISSION 6-4-82

DATE RECEIVED BY HED 6-17-82

RD REQUESTED COMPLETION DATE 9-17-82

EEB ESTIMATED COMPLETION DATE 9-10-82

RD ACTION CODE/TYPE OF REVIEW 740/ Eup - Old Chemical

TYPE PRODUCT(S): I, D, H, F, N, R, S Rodenticide

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. W. Miller (16)

PRODUCT NAME(S) Talon - G

COMPANY NAME ICI Americas, Inc.

SUBMISSION PURPOSE EUP For Use Against Pocket Gophers

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
112701	Brodifacoum	.005

Brodifacoum (Talon-G) 112701 (10182-EUP-GR)
50 ppm Formulation.

100. Pesticide label Information

100.1 Pesticide Use

This EUP application is for testing the 50 ppm formulation of Broadifacoum (Talon-G) against pocket gophers.

100.2. Formulation Information

Brodifacoum	0.005%
Inerts	99.995
	100%

Whole mile grain based product

100.3 Application Methods, Directions, Rates

"For control of pocket gophers such as Thomomys or Geomys species in areas where gophers are found including home, barn and yard, golf courses, airports, embankments, landscaped areas, crop perimeters, dormant orchards, pastures, rangeland and forest areas.

Apply below ground level within tunnels between active mounds through use of a hand probe, dropping 2-10 grams into the tunnels per placement for a suggested rate to not exceed 10 lb per acre.

For use of mechanical burrow builders such as the Elston Burrow Builder, adjust machine to deliver a rate not to exceed 10 lb/A; this would be equivalent to two pellets per linear foot of artificial burrow when such burrows were 30 feet apart throughout treated acreage.

Not for use within growing crops. Spilled bait must be picked up or buried."

100.4 Target Organisms

Pocket Gophers

100.5 Precautionary labeling

"This product is toxic to wildlife. Keep out of lakes, streams or ponds."

101 Physical and Chemical Properties

See previous reviews

102 Behavior in the Environment

See previous Reviews

103 Toxicological Properties

See previous Reviews

104 Hazard Assessment

104.1 Discussion

104.1.1 Proposed Experimental Program

Personnel

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Mr. Tom Heel	Techncial Representative So. Dak.
Ms. Michele Beguhn	Technical Representative Iowa.
Dr. Harlan Feese	Technical Representative TX
Mr. Don Porter	Techncial Representative Wis.
Mr. Chris Furqueron	Technical Reresentative FL.

States in which Broadifacoum is to be used and amount proposed for use:

The proposed U.S. Fish and Wildlife gopher study site will involve 200 treated acres of gopher milo bait containing 50 ppm brodifacoum applied with a burrow builder machine. No more than 2,000 lbs of bait will be applied in this evaluation. Smaller trials of less than 10 acres each generally involving handprobes on embankments, golf courses, and other landscaped or noncrop areas are desired for California, Wasington, North Dakota, Nebraska, Texas, Minnesota, and/or Florida. A total of no more than 10 trials will be conducted nationally, each utilizing no more than 100 lbs of bait. Therefore, the total EUP request for the proposed program is 3,000 lbs of 50 ppm milo gopher bait (0.15 lb active).

104.1.2 Analysis of Proposal

Since neither an LC_{50} nor an LD_{50} with brodifacoum against gophers has been obtained, the suggested use of a 50 ppm formulation in field trials does not seem plausible. The FWS proposed site of Sherburne National Wildlife Refuge

in Sherburne County, Minnesota appears to be an acceptable test site, however, the rest of the program, due to lack of specific sites, is unacceptable. Due to the primary and secondary hazards of this product EEB will need to know the projected specific or named sites within each state in order to complete the hazard assessment.

104.2 Likelihood of Adverse Effects to non-target Organisms (includes exposure and toxicity)

As has been explained to the registrant in previous meetings and reviews, the field use of the 50 ppm product is very likely to adversely affect non-target organisms. The registrant has conducted field testing with the 10 ppm product and has not submitted the results to date. Since gophers are known to venture from their burrows seeking food and/or migrating to new areas potential secondary hazard exist. Gophers are also known to clean out their burrows pushing foreign matter, feces, and toxic grain baits to the surface creating primary exposure to nontargets (primarily birds). Concerning the toxicity of this product, the registrant has agreed in meetings that this product is of a highly toxic nature.

104.3 Endangered species Consideration

With the exception of the USFWS site in Sherburne National Wildlife Refuge, no other specific sites have been delineated. Informal consultation, in regards to this site, indicated that with the exception of the bald eagle, no other terrestrial endangered species were known to be in the area. Since EEB could not consult on the rest of the sites, primarily due to the registrant's incomplete packet, we know that the following proposed states contain one or more endangered species that could be adversely impacted by this product: California, Washington, North Dakota, Florida, Texas, Nebraska, South Dakota, Arizona, Minnesota, Iowa and Wisconsin.

104.4 Additional Data Required

(1) The determining of an LC_{50} and/or LD_{50} for pocket goghers with residue analysis of a statistically significant number will be necessary in order to determine a realistic secondary hazard potential.

(2) Testing on reptiles and amphibians may be necessary inorder to complete a hazard assessment. Also, formal consultation with the Office of Endangered Species, USFWS, USDI is contemplated.

(3) Field monitoring (radio telemetry) of nontarget bird and mammal populations, along with residue analysis of representatives of these groups may be necessary inorder to answer the exposure questions.

107 Conclusions

The Registrant should be made aware of sections: 104.1.2, 104.2, 104.3 and 104.4.

EEB feels that until such time as the field reports for the 10 ppm product are submitted and evaluated that the use of a 50 ppm product in the field should be avoided. The Registrant apparently realized the problems associated with a 50 ppm field formulation and therefore lowered the formulation to 10 ppm.

EEB further requests clarification of the following points:

1) At a meeting in the fall of 1981 the registrant agreed to modify the environmental hazard section of the label for the 50 ppm products. We note that there has been no change.

2) Why does the label state milo grain, and the directions under the burrow builder application states pellets? Which bait form is correct?

3). We found the hand probe directions incomplete in relationship to other gopher control products. We also are curious how "2-10 grams" is to be determined in the field.

4) If this product is "not for use within growing crops" then why are "forest" use sites? Should the term be "Food crops"?

5) In Appendix I USFWS/DWRC Work Unit 924:25 is a discussion on the control of gophers. However, in the daily schedule (Day 13-33) the search is not for gophers but for ground squirrels. Are both animals going to be radio tagged and monitored? If so, why is the EUP for gophers?

6) Why was the period of August to December determined to be the best time for this study? Do gopher cache food for the winter in Northern climates? It is possible that all or most all of the grain bait could be cached?

7) If the grain bait is cached, will the gophers have sufficient time in fourteen post treatment days to feed on this cache?

8) What monitering of the treatment sites will be done to determine if the grain is pushed from the burrow by the gopher?

9) In relationship to the range finding and LD_{50} test, a necropsy of all animals should be carried out in which the sex of the animal is determined; if the females were pregnant; notes made of gross morphological changes; etc.

10) Body residue analysis should detail the high concentration areas of the gopher's body and the total body loading.

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Ecological Effects Branch/HED

Date: 8/26/82

Raymond Matheny
Head, Review Section 1
Ecological Effects Branch/HED

Date: 8/26/82

For Clayton Bushong
Branch Chief
Ecological Effects Branch/HED

Date: 8/26/82

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